

In the Claims:

Claim 1. (Currently amended) In an agricultural harvester having a crop processing unit comprising a- an axial rotor having an axis of rotation and a housing, the rotor comprising:

a drum having a rearward cylindrical portion and a forwardly extending frusto-conical portion, the surface of the frusto-conical portion comprising an aft-region adjacent to the rearward cylindrical portion of the drum, and a fore-region;

an infeed section for receiving harvested crop material, the infeed section having at least one infeed element being-located on the fore-region of the frusto-conical portion of the drum;

a crop processing section for processing harvested crop material received from the infeed section of the rotor, the crop processing section having at least one crop processing element being-located on the aft-region of the frusto-conical portion of the drum, the crop processing element having a crop engaging portion that is parallel to the axis of rotation,

wherein the infeed element and the crop processing element are helically orientated and are helically aligned on the frusto-conical portion.

2. (Currently amended) The rotor described in Claim 1 wherein the crop engaging portion of the crop processing element of the crop processing section sweeps a cylindrical path upon rotation of the rotor.

3. (Currently amended) The rotor described in Claim 2 wherein the crop processing section is a crop-processing threshing section and the crop processing element is a threshing element.

4. (Original) The rotor described in Claim 3 wherein the infeed element is a helical infeed flight.

5. (Currently amended) The rotor described in Claim 1 having at least one-a second crop processing element being-located on the rearward cylindrical portion of the drum.

6. (Currently amended) The rotor described in Claim 5 wherein the second crop processing element of the crop processing section sweeps a cylindrical path upon rotation of the rotor.
7. (Currently amended) The rotor described in Claim 6 wherein the crop processing section is a threshing section and the second crop processing element is a threshing element.
8. (Original) The rotor described in Claim 7 wherein the infeed element is a helical infeed flight.
9. (Currently amended) In an agricultural harvester having a crop processing unit comprising a rotor having an axis of rotation and a housing, the rotor comprising:
 - a drum having a rearward cylindrical portion and a forwardly extending frusto-conical portion, the surface of the frusto-conical portion comprising an aft-region adjacent to the rearward cylindrical portion of the drum, and a fore-region;
 - an infeed section for receiving harvested crop material, the infeed section having at least one infeed element being located on the fore-region of the frusto-conical portion of the drum;
 - a crop processing section for processing harvested crop material received from the infeed section of the rotor, the crop processing section having at least one crop processing element being located on the aft-region of the frusto-conical portion of the drum, the crop processing element sweeping having a crop engaging portion that is parallel to the axis of rotation and sweeps a cylindrical path upon rotation of the rotor,
wherein the infeed element and the crop processing element are helically orientated and are helically aligned on the frusto-conical portion.
10. (Original) The rotor described in Claim 9 wherein the crop processing section is a threshing section and the crop processing element is a threshing element.
11. (Original) The rotor described in Claim 10 wherein the infeed element is a helical infeed flight.

12. (Currently amended) The rotor described in Claim 9 having at least ~~one-a~~ second crop processing element being-located on the rearward cylindrical portion of the drum.

13. (Canceled).

14. (Currently amended) The rotor described in Claim 4-312 wherein the crop processing section is a threshing section and the crop processing element is a threshing element.

15. (Original) The rotor described in Claim 14 wherein the infeed element is a helical infeed flight.

16. (Currently amended) In an agricultural harvester having a crop processing unit comprising a rotor having an axis of rotation and a housing, the rotor comprising:

a drum having a rearward cylindrical portion and a forwardly extending frusto-conical portion, the surface of the frusto-conical portion comprising an aft-region adjacent to the rearward cylindrical portion of the drum, and a fore-region;

an infeed section for receiving harvested crop material, the infeed section having at least one infeed element being-located on the fore-region of the frusto-conical portion of the drum;

a crop processing section for processing harvested crop material received from the infeed section of the rotor, the crop processing section having at least ~~one-a~~ first crop processing element being-located on the aft-region of the frusto-conical portion of the drum, the first crop processing element having a crop engaging portion that is parallel to the axis of rotation,

wherein the infeed element and the first crop processing element are helically orientated and are helically aligned on the frusto-conical portion,

and having at least ~~one-a~~ second crop processing element being-located on the rearward cylindrical portion of the drum.

17. (Currently amended) The rotor described in Claim 16 wherein the crop processing section is a threshing section and the first and second crop processing element is a threshing element.

18. (Original) The rotor described in Claim 17 wherein the infeed element is a helical infeed flight.
19. (Currently amended) The rotor described in Claim 16 wherein the first crop processing element of the crop processing section sweeps a cylindrical path upon rotation of the rotor.
20. (Currently amended) The rotor described in Claim 19 wherein the crop processing section is a threshing section and the first and second crop processing element is a threshing element.